ELSEVIER

PHYSICS REPORTS

www.elsevier.com/locate/physrep

Author index to volumes 311–320

Abramowicz, M.A., Gravitational radiation in optical geometry applied to super-compact stars 311 (1999) 325
Agasian, N.O., B.O. Kerbikov and V.I. Shevchenko, Nonperturbative QCD vacuum and colour superconductivity 320 (1999) 131
Agren, H., *see* F. Gel'mukhanov 312 (1999) 87
Ali, A. and D. London, Precision flavour physics and supersymmetry 320 (1999) 79
Altarelli, G. and F. Feruglio, Neutrino masses and mixings: a theoretical perspective 320 (1999) 295
Arecchi, F.T., S. Boccaletti and P. Ramazza, Pattern formation and competition in nonlinear optics 318 (1999) 1

Bailin, D. and A. Love, Orbifold compactifications of string theory 315 (1999) 285
Balantekin, A.B., Neutrino propagation in matter 315 (1999) 123
Balian, R., H. Flocard and M. Véneroni, Variational extensions of BCS theory 317 (1999) 251
Baron, E., *see* S.L. Pistinner 311 (1999) 151
Baschek, B., *see* R. Wehrse 311 (1999) 187
Baschek, B. and R. Wehrse, Radiation fields in moving media: effects of many spectral lines in AGN accretion disks 311 (1999) 201
Beck, C., *see* S.J. Sanders 311 (1999) 487
Bender, C.M., The complex pendulum 315 (1999) 27
Beneke, M., Renormalons 317 (1999) 1
Boccaletti, S., *see* F.T. Arecchi 318 (1999) 1
Brédas, J.L., *see* W.R. Salaneck 319 (1999) 231
Buchmüller, W. and M. Plümacher, Matter–antimatter asymmetry and neutrino properties 320 (1999) 329

Calogeracos, A., *see* N. Dombey 315 (1999) 41
Chanowitz, M.S., Quantum corrections from nonresonant WW scattering 320 (1999) 139
Chapline, G., Is theoretical physics the same thing as mathematics? 315 (1999) 95
Collin, S., Quasars, accretion disks, and pregalactic enrichment of galaxies and IGM 311 (1999) 463
Cooper, F., Inclusive dilepton production at RHIC: a field theory approach based on a non-equilibrium chiral phase transition 315 (1999) 59

Dar, A. and G. Shaviv, The solar neutrino problem – an update 311 (1999) 115
de Pablo, J.J., *see* F.A. Escobedo 318 (1999) 85
Deb, B.M., *see* R. Singh 311 (1999) 47

0370-1573/99/$ – see front matter © 1999 Published by Elsevier Science B.V. All rights reserved.
PII: S0370-1573(99)00098-8

Dolgov, A.D., Long-range forces in the universe 320 (1999) 1
Dombey, N. and A. Calogeracos, Seventy years of the Klein paradox 315 (1999) 41
Drell, S.D., Cooperation between scientists and the government in the US: benefits and problems 320 (1999) 17
Dubovsky, S.L., D.S. Gorbunov, M.V. Libanov and V.A. Rubakov, Non-renormalization of induced charges and constraints on strongly coupled theories 320 (1999) 147
Dvali, G. and M. Shifman, Tilting the brane, or some cosmological consequences of the brane Universe 320 (1999) 107

Eichler, D., *see* S.L. Pistinner 311 (1999) 475
El-Zant, A., Dissipative motion in galaxies with non-axisymmetric potentials 311 (1999) 279
Ellis, J. and N.E. Mavromatos, Comments on CP, T and CPT violation in neutral kaon decays 320 (1999) 341
Escobedo, F.A. and J.J. de Pablo, Molecular simulation of polymeric networks and gels: phase behavior and swelling 318 (1999) 85

Feruglio, F., *see* G. Altarelli 320 (1999) 295
Fineberg, J. and M. Marder, Instability in dynamic fracture 313 (1999) 1
Flocard, H., *see* R. Balian 317 (1999) 251
Friend, R.H., *see* W.R. Salaneck 319 (1999) 231

Gaidaenko, I.V., A.V. Novikov, V.A. Novikov, A.N. Rozanov and M.I. Vysotsky, Enhanced electroweak radiative corrections in SUSY and precision data 320 (1999) 119
Galt'sov, D.V., *see* M.S. Volkov 319 (1999) 1
Gehrz, R.D., Infrared studies of classical novae and their contributions to the ISM 311 (1999) 405
Gel'mukhanov, F. and H. Agren, Resonant X-ray Raman scattering 312 (1999) 87
Gershtein, S.S., A.A. Likhoded and A.I. Onishchenko, TeV-scale leptoquarks from GUTs/string/M-theory unification 320 (1999) 159
Ginocchio, J.N., A relativistic symmetry in nuclei 315 (1999) 231
Glasner, S.A., Modeling multidimensional reactive flows during nova outbursts – achievements and challenges 311 (1999) 395
Godon, P., Non-axisymmetric hydrodynamic instability and transition to turbulence in two-dimensional accretion discs 311 (1999) 271
Goldhaber, A.S., Dual confinement of grand unified monopoles? 315 (1999) 83
Gorbunov, D.S., *see* S.L. Dubovsky 320 (1999) 147
Goto, T., *see* I.V. Ostrovskii 311 (1999) 1
Grimmeiss, H.G., *see* I.V. Ostrovskii 311 (1999) 1

Hameury, J.M., *see* I. Idan 311 (1999) 213
Hatano, Y., Interaction of vacuum ultraviolet photons with molecules. Formation and dissociation dynamics of molecular superexcited states 313 (1999) 109
Hauschildt, P.H., *see* S.L. Pistinner 311 (1999) 151
Hayes, A.C., Nuclear structure issues determining neutrino-nucleus cross sections 315 (1999) 257
Haymaker, R.W., Confinement studies in lattice QCD 315 (1999) 153
Heinz, U., *see* U.A. Wiedemann 319 (1999) 145
Hussein, M., *see* E. Timmermans 315 (1999) 199

Idan, I., J.P. Lasota, J.M. Hameury and G. Shaviv, Radiation from dwarf nova discs 311 (1999) 213
Ivanov, I.P., N.N. Nikolaev, A.V. Pronyaev and W. Schäfer, How unitarity imposes a steep small-x rise of spin structure function $g_{LT} = g_1 + g_2$ and breaking of DIS sum rules 320 (1999) 175

Jackson, J.D., From Alexander of Aphrodisias to Young and Airy 320 (1999) 27
Jacob, M., Multiparticle production 315 (1999) 7
Joss, P.C., Massive supernovae in binary systems 311 (1999) 345

Kazakov, D.I., The Higgs boson: shall we see it soon or is it still far away? 320 (1999) 187
Kerbikov, B.O., *see* N.O. Agasian 320 (1999) 131
Kerman, A., *see* E. Timmermans 315 (1999) 199
Khriplovich, I.B., Particle creation by charged black holes 320 (1999) 37
King, A.R., Black hole and transient binaries 311 (1999) 337
Konjević, N., Plasma broadening and shifting of non-hydrogenic spectral lines: Present status and applications 316 (1999) 339
Korotchenkov, O.A., *see* I.V. Ostrovskii 311 (1999) 1
Kovetz, A., Nova evolution with optically thick winds 311 (1999) 383
Kramer, P.R., *see* A.J. Majda 314 (1999) 237
Kuzmin, V.A. and I.I. Tkachev, Ultra-high-energy cosmic rays and inflation relics 320 (1999) 199

Ladik, J.J., Polymers as solids: a quantum mechanical treatment 313 (1999) 171
Lai, R. and A.J. Sievers, Nonlinear nanoscale localization of magnetic excitations in atomic lattices 314 (1999) 147
Landsberg, L.G., Search for exotic baryons with hidden strangeness in diffractive production processes 320 (1999) 223
Laor, A., Astrophysical evidence for massive black holes 311 (1999) 451
Lasota, J.-P., ADAFs – Models, observations and problems 311 (1999) 247
Lasota, J.P., *see* I. Idan 311 (1999) 213
Leike, A., The phenomenology of extra neutral gauge bosons 317 (1999) 143
Li, H., *see* F.C. Michel 318 (1999) 227
Libanov, M.V., *see* S.L. Dubovsky 320 (1999) 147
Lieb, E.H. and J. Yngvason, Erratum. The physics and mathematics of the second law of thermodynamics (Physics Reports 310 (1999) 1–96) 314 (1999) 669
Likhoded, A.A., *see* S.S. Gershtein 320 (1999) 159
Lipatov, L.N., Hamiltonian for Reggeon interactions in QCD 320 (1999) 249
Livio, M., Astrophysical jets: a phenomenological examination of acceleration and collimation 311 (1999) 225
London, D., *see* A. Ali 320 (1999) 79
Love, A., *see* D. Bailin 315 (1999) 285
Lyth, D.H. and A. Riotto, Particle physics models of inflation and the cosmological density perturbation 314 (1999) 1

Main, J., Use of harmonic inversion techniques in semiclassical quantization and analysis of quantum spectra 316 (1999) 233
Majda, A.J. and P.R. Kramer, Simplified models for turbulent diffusion: Theory, numerical modelling, and physical phenomena 314 (1999) 237

Mandula, J.E., The gluon propagator 315 (1999) 273
Marder, M., *see* J. Fineberg 313 (1999) 1
Matinyan, S., Multiparton collisions and multiplicity distribution in high-energy $pp(\bar{p}p)$ collisions 320 (1999) 261
Mavromatos, N.E., *see* J. Ellis 320 (1999) 341
Mazeh, T., The mass distribution of extrasolar planet candidates and low-mass secondaries 311 (1999) 317
Mestel, L., The early days of stellar structure theory 311 (1999) 295
Michel, F.C. and H. Li, Electrodynamics of neutron stars 318 (1999) 227

Nakel, W. and C.T. Whelan, Relativistic (e, 2e) processes 315 (1999) 409
Nayak, R.C., *see* L. Satpathy 319 (1999) 85
Nekrasov, N. and S.L. Shatashvili, On non-supersymmetric CFT in four dimensions 320 (1999) 127
Nikolaev, N.N., *see* I.P. Ivanov 320 (1999) 175
Novikov, A.V., *see* I.V. Gaidaenko 320 (1999) 119
Novikov, V.A., *see* I.V. Gaidaenko 320 (1999) 119

Obers, N.A. and B. Pioline, U-duality and M-theory 318 (1999) 113
Onishchenko, A.I., *see* S.S. Gershtein 320 (1999) 159
Orio, M., X-ray observations of classical and recurrent novae 311 (1999) 419
Ostrovskii, I.V., O.A. Korotchenkov, T. Goto and H.G. Grimmeiss, Sonoluminescence and acoustically driven optical phenomena in solids and solid–gas interfaces 311 (1999) 1

Patera, J. and R. Twarock, Quasicrystal Lie algebras and their generalizations 315 (1999) 241
Pengpan, T. and P. Ramond, M(ysterious) patterns in SO(9) 315 (1999) 137
Pioline, B., *see* N.A. Obers 318 (1999) 113
Piran, T., Gamma-ray bursts and the fireball model 314 (1999) 575
Pistinner, S.L., P.H. Hauschildt, D. Eichler and E. Baron, On the primordial helium abundance and spectroscopic uncertainties 311 (1999) 151
Pistinner, S.L. and D. Eichler, Self-inhibiting heat flux: a chance for snowballs in hell? 311 (1999) 475
Plümacher, M., *see* W. Buchmüller 320 (1999) 329
Pronyaev, A.V., *see* I.P. Ivanov 320 (1999) 175

Raffelt, G.G., Limits on neutrino electromagnetic properties – an update 320 (1999) 319
Ramazza, P., *see* F.T. Arecchi 318 (1999) 1
Ramond, P., *see* T. Pengpan 315 (1999) 137
Reinhard, P.-G., *see* G. Zwicknagel 314 (1999) 671
Riotto, A., *see* D.H. Lyth 314 (1999) 1
Rozanov, A.N., *see* I.V. Gaidaenko 320 (1999) 119
Rubakov, V.A., *see* S.L. Dubovsky 320 (1999) 147
Ryzhikh, D.A. and K.A. Ter-Martirosyan, Mass and CKM matrices of quarks and leptons, the leptonic CP-phase in neutrino oscillations 320 (1999) 359

Salaneck, W.R., R.H. Friend and J.L. Brédas, Electronic structure of conjugated polymers: consequences of electron – lattice coupling 319 (1999) 231
Salpeter, E.E., Giant disk galaxies, dwarfs and Lyman alpha clouds 311 (1999) 429
Sanders, S.J., A. Szanto de Toledo and C. Beck, Binary decay of light nuclear systems 311 (1999) 487

Satpathy, L., V.S. Uma Maheswari and R.C. Nayak, Finite nuclei to nuclear matter: a leptodermous approach 319 (1999) 85
Schael, S., B physics at the Z-resonance 313 (1999) 293
Schäfer, W., *see* I.P. Ivanov 320 (1999) 175
Schatzman, E., Role of gravity waves in the solar neutrino problem 311 (1999) 143
Schwarz, J.H., From superstrings to M theory 315 (1999) 107
Shabalin, E., The value of $\acute{\varepsilon}/\varepsilon$; in a theory with extended Higgs sector 320 (1999) 355
Shara, M.M., Stellar collisions and mergers in the cores of globular clusters 311 (1999) 363
Shatashvili, S.L., *see* N. Nekrasov 320 (1999) 127
Shaviv, G. and N.J. Shaviv, Is there a dynamic effect in the screening of nuclear reactions in stellar plasmas? 311 (1999) 99
Shaviv, G., *see* A. Dar 311 (1999) 115
Shaviv, G., *see* I. Idan 311 (1999) 213
Shaviv, N.J., *see* G. Shaviv 311 (1999) 99
Shaviv, N.J., The instability of radiative flows: from the early universe to the Eddington luminosity limit 311 (1999) 177
Shevchenko, V.I., *see* N.O. Agasian 320 (1999) 131
Shifman, M., *see* G. Dvali 320 (1999) 107
Shlosman, I., Stellar bars in disk galaxies: From banyans to butterflies? 311 (1999) 439
Sievers, A.J., *see* R. Lai 314 (1999) 147
Simonov, Yu.A., Perturbative–nonperturbative interference in the static QCD interaction at small distances 320 (1999) 265
Singh, R. and B.M. Deb, Developments in excited-state density functional theory 311 (1999) 47
Sion, E.M., HST studies of cataclysmic variable white dwarfs 311 (1999) 353
Smak, J., Cataclysmic variables 311 (1999) 331
Soker, N. , Axisymmetrical structures of planetary nebulae and SN 1987A 311 (1999) 307
Sornette, D., Earthquakes: from chemical alteration to mechanical rupture 313 (1999) 237
Spiegel, E.A. and L. Tao, Photofluid instabilities of hot stellar envelopes 311 (1999) 163
Starrfield, S., Recent advances in studies of the nova outburst 311 (1999) 371
Stodolsky, L., Decoherence–fluctuation relation and measurement noise 320 (1999) 51
Szanto de Toledo, A., *see* S.J. Sanders 311 (1999) 487

Tan, C.-I., Diffractive production at collider energies and factorization 315 (1999) 175
Tao, L., *see* E.A. Spiegel 311 (1999) 163
Ter-Martirosyan, K.A., *see* D.A. Ryzhikh 320 (1999) 359
Timmermans, E., P. Tommasini, M. Hussein and A. Kerman, Feshbach resonances in atomic Bose–Einstein condensates 315 (1999) 199
Tkachev, I.I., *see* V.A. Kuzmin 320 (1999) 199
Toepffer, C., *see* G. Zwicknagel 314 (1999) 671
Tommasini, P., *see* E. Timmermans 315 (1999) 199
Twarock, R., *see* J. Patera 315 (1999) 241

Uma Maheswari, V.S., *see* L. Satpathy 319 (1999) 85

Vénéroni, M., *see* R. Balian 317 (1999) 251
Volkov, M.S. and D.V. Galt'sov, Gravitating non-Abelian solitons and black holes with Yang–Mills fields 319 (1999) 1

Voloshin, M.B., Relations between inclusive decay rates of heavy baryons 320 (1999) 275
Vysotsky, M.I., *see* I.V. Gaidaenko 320 (1999) 119

Wagoner, R.V., Relativistic diskoseismology 311 (1999) 259
Wehrse, R. and B. Baschek, Radiation fields in moving media: new analytical and numerical solutions of the transfer equation 311 (1999) 187
Wehrse, R., *see* B. Baschek 311 (1999) 201
Whelan, C.T., *see* W. Nakel 315 (1999) 409
Wiedemann, U.A. and U. Heinz, Particle interferometry for relativistic heavy-ion collisions 319 (1999) 145
Wolle, B., Tokamak plasma diagnostics based on measured neutron signals 312 (1999) 1

Ynduráin, F.J., Gluon condensate from superconvergent QCD sum rule 320 (1999) 287
Yngvason, J., *see* E.H. Lieb 314 (1999) 669
Youm, D., Black holes and solitons in string theory 316 (1999) 1

Zakharov, V.I., Anatomy of a confining string 320 (1999) 59
Zwicknagel, G., C. Toepffer and P.-G. Reinhard, Erratum. Stopping of heavy ions in plasmas at strong coupling (Physics Reports 309 (1999) 117–208) 314 (1999) 671

ELSEVIER

PHYSICS REPORTS

www.elsevier.com/locate/physrep

Subject index to volumes 311–320

General

Is there a dynamic effect in the screening of nuclear reactions in stellar plasmas?, G. Shaviv and N.J. Shaviv 311 (1999) 99
Role of gravity waves in the solar neutrino problem, E. Schatzman 311 (1999) 143
ADAFs – Models, observations and problems, J.-P. Lasota 311 (1999) 247
Relativistic diskoseismology, R.V. Wagoner 311 (1999) 259
Gravitational radiation in optical geometry applied to super-compact stars, M.A. Abramowicz 311 (1999) 325
Earthquakes: from chemical alteration to mechanical rupture, D. Sornette 313 (1999) 237
Simplified models for turbulent diffusion: Theory, numerical modelling, and physical phenomena, A.J. Majda and P.R. Kramer 314 (1999) 237
Multiparticle production, M. Jacob 315 (1999) 7
The complex pendulum, C.M. Bender 315 (1999) 27
Seventy years of the Klein paradox, N. Dombey and A. Calogeracos 315 (1999) 41
Is theoretical physics the same thing as mathematics?, G. Chapline 315 (1999) 95
From superstrings to M theory, J.H. Schwarz 315 (1999) 107
M(ysterious) patterns in SO(9), T. Pengpan and P. Ramond 315 (1999) 137
Feshbach resonances in atomic Bose–Einstein condensates, E. Timmermans, P. Tommasini, M. Hussein and A. Kerman 315 (1999) 199
A relativistic symmetry in nuclei, J.N. Ginocchio 315 (1999) 231
Quasicrystal Lie algebras and their generalizations, J. Patera and R. Twarock 315 (1999) 241
Use of harmonic inversion techniques in semiclassical quantization and analysis of quantum spectra, J. Main 316 (1999) 233
Renormalons, M. Beneke 317 (1999) 1
Variational extensions of BCS theory, R. Balian, H. Flocard and M. Véneroni 317 (1999) 251
Pattern formation and competition in nonlinear optics, F.T. Arecchi, S. Boccaletti and P. Ramazza 318 (1999) 1
Gravitating non-Abelian solitons and black holes with Yang–Mills fields, M.S. Volkov and D.V. Galt'sov 319 (1999) 1
Long-range forces in the universe, A.D. Dolgov 320 (1999) 1
Cooperation between scientists and the government in the US: benefits and problems, S.D. Drell 320 (1999) 17
From Alexander of Aphrodisias to Young and Airy, J.D. Jackson 320 (1999) 27
Particle creation by charged black holes, I.B. Khriplovich 320 (1999) 37
Decoherence–fluctuation relation and measurement noise, L. Stodolsky 320 (1999) 51

0370-1573/99/$ – see front matter © 1999 Published by Elsevier Science B.V. All rights reserved.
PII: S0370-1573(99)00099-X

The physics of elementary particles and fields

B physics at the Z-resonance, S. Schael 313 (1999) 293
The complex pendulum, C.M. Bender 315 (1999) 27
Seventy years of the Klein paradox, N. Dombey and A. Calogeracos 315 (1999) 41
Inclusive dilepton production at RHIC: a field theory approach based on a non-equilibrium chiral phase transition, F. Cooper 315 (1999) 59
Dual confinement of grand unified monopoles?, A.S. Goldhaber 315 (1999) 83
From superstrings to M theory, J.H. Schwarz 315 (1999) 107
Neutrino propagation in matter, A.B. Balantekin 315 (1999) 123
M(ysterious) patterns in SO(9), T. Pengpan and P. Ramond 315 (1999) 137
Confinement studies in lattice QCD, R.W. Haymaker 315 (1999) 153
Diffractive production at collider energies and factorization, C.-I. Tan 315 (1999) 175
The gluon propagator, J.E. Mandula 315 (1999) 273
Orbifold compactifications of string theory, D. Bailin and A. Love 315 (1999) 285
Black holes and solitons in string theory, D. Youm 316 (1999) 1
Renormalons, M. Beneke 317 (1999) 1
The phenomenology of extra neutral gauge bosons, A. Leike 317 (1999) 143
U-duality and M-theory, N.A. Obers and B. Pioline 318 (1999) 113
Gravitating non-Abelian solitons and black holes with Yang–Mills fields, M.S. Volkov and D.V. Galt'sov 319 (1999) 1
Particle creation by charged black holes, I.B. Khriplovich 320 (1999) 37
Anatomy of a confining string, V.I. Zakharov 320 (1999) 59
Precision flavour physics and supersymmetry, A. Ali and D. London 320 (1999) 79
Tilting the brane, or some cosmological consequences of the brane Universe, G. Dvali and M. Shifman 320 (1999) 107
Enhanced electroweak radiative corrections in SUSY and precision data, I.V. Gaidaenko, A.V. Novikov, V.A. Novikov, A.N. Rozanov and M.I. Vysotsky 320 (1999) 119
On non-supersymmetric CFT in four dimensions, N. Nekrasov and S.L. Shatashvili 320 (1999) 127
Nonperturbative QCD vacuum and colour superconductivity, N.O. Agasian, B.O. Kerbikov and V.I. Shevchenko 320 (1999) 131
Quantum corrections from nonresonant WW scattering, M.S. Chanowitz 320 (1999) 139
Non-renormalization of induced charges and constraints on strongly coupled theories, S.L. Dubovsky, D.S. Gorbunov, M.V. Libanov and V.A. Rubakov 320 (1999) 147
TeV-scale leptoquarks from GUTs/string/M-theory unification, S.S. Gershtein, A.A. Likhoded and A.I. Onishchenko 320 (1999) 159
How unitarity imposes a steep small-x rise of spin structure function $g_{LT} = g_1 + g_2$ and breaking of DIS sum rules, I.P. Ivanov, N.N. Nikolaev, A.V. Pronyaev and W. Schäfer 320 (1999) 175
The Higgs boson: shall we see it soon or is it still far away?, D.I. Kazakov 320 (1999) 187
Search for exotic baryons with hidden strangeness in diffractive production processes, L.G. Landsberg 320 (1999) 223
Hamiltonian for Reggeon interactions in QCD, L.N. Lipatov 320 (1999) 249
Multiparton collisions and multiplicity distribution in high-energy $pp(\bar{p}p)$ collisions, S. Matinyan 320 (1999) 261
Perturbative–nonperturbative interference in the static QCD interaction at small distances, Yu.A. Simonov 320 (1999) 265
Relations between inclusive decay rates of heavy baryons, M.B. Voloshin 320 (1999) 275

Gluon condensate from superconvergent QCD sum rule, F.J. Ynduráin 320 (1999) 287
Neutrino masses and mixings: a theoretical perspective, G. Altarelli and F. Feruglio 320 (1999) 295
Limits on neutrino electromagnetic properties – an update, G.G. Raffelt 320 (1999) 319
Matter–antimatter asymmetry and neutrino properties, W. Buchmüller and M. Plümacher 320 (1999) 329
Comments on CP, T and CPT violation in neutral kaon decays, J. Ellis and N.E. Mavromatos 320 (1999) 341
The value of ε'/ε in a theory with extended Higgs sector, E. Shabalin 320 (1999) 355
Mass and CKM matrices of quarks and leptons, the leptonic CP-phase in neutrino oscillations, D.A. Ryzhikh and K.A. Ter-Martirosyan 320 (1999) 359

Nuclear physics

The solar neutrino problem – an update, A. Dar and G. Shaviv 311 (1999) 115
Role of gravity waves in the solar neutrino problem, E. Schatzman 311 (1999) 143
Binary decay of light nuclear systems, S.J. Sanders, A. Szanto de Toledo and C. Beck 311 (1999) 487
Inclusive dilepton production at RHIC: a field theory approach based on a non-equilibrium chiral phase transition, F. Cooper 315 (1999) 59
Neutrino propagation in matter, A.B. Balantekin 315 (1999) 123
A relativistic symmetry in nuclei, J.N. Ginocchio 315 (1999) 231
Nuclear structure issues determining neutrino-nucleus cross sections, A.C. Hayes 315 (1999) 257
Variational extensions of BCS theory, R. Balian, H. Flocard and M. Véneroni 317 (1999) 251
U-duality and M-theory, N.A. Obers and B. Pioline 318 (1999) 113
Finite nuclei to nuclear matter: a leptodermous approach, L. Satpathy, V.S. Uma Maheswari and R.C. Nayak 319 (1999) 85
Particle interferometry for relativistic heavy-ion collisions, U.A. Wiedemann and U. Heinz 319 (1999) 145

Atomic and molecular physics

Developments in excited-state density functional theory, R. Singh and B.M. Deb 311 (1999) 47
Resonant X-ray Raman scattering, F. Gel'mukhanov and H. Agren 312 (1999) 87
Interaction of vacuum ultraviolet photons with molecules. Formation and dissociation dynamics of molecular superexcited states, Y. Hatano 313 (1999) 109
Feshbach resonances in atomic Bose–Einstein condensates, E. Timmermans, P. Tommasini, M. Hussein and A. Kerman 315 (1999) 199
Relativistic (e, 2e) processes, W. Nakel and C.T. Whelan 315 (1999) 409
Plasma broadening and shifting of non-hydrogenic spectral lines: Present status and applications, N. Konjević 316 (1999) 339
Molecular simulation of polymeric networks and gels: phase behavior and swelling, F.A. Escobedo and J.J. de Pablo 318 (1999) 85
Electronic structure of conjugated polymers: consequences of electron–lattice coupling, W.R. Salaneck, R.H. Friend and J.L. Brédas 319 (1999) 231

Classical areas of phenomenology (including applications)

Photofluid instabilities of hot stellar envelopes, E.A. Spiegel and L. Tao 311 (1999) 163
Radiation fields in moving media: new analytical and numerical solutions of the transfer equation, R. Wehrse and B. Baschek 311 (1999) 187

Radiation fields in moving media: effects of many spectral lines in AGN accretion disks, B. Baschek and R. Wehrse 311 (1999) 201
Modeling multidimensional reactive flows during nova outbursts – achievements and challenges, S.A. Glasner 311 (1999) 395
Instability in dynamic fracture, J. Fineberg and M. Marder 313 (1999) 1
Nonlinear nanoscale localization of magnetic excitations in atomic lattices, R. Lai and A.J. Sievers 314 (1999) 147
Simplified models for turbulent diffusion: Theory, numerical modelling, and physical phenomena, A.J. Majda and P.R. Kramer 314 (1999) 237
Electronic structure of conjugated polymers: consequences of electron–lattice coupling, W.R. Salaneck, R.H. Friend and J.L. Brédas 319 (1999) 231
From Alexander of Aphrodisias to Young and Airy, J.D. Jackson 320 (1999) 27

Fluids, plasmas and electric discharges

Sonoluminescence and acoustically driven optical phenomena in solids and solid–gas interfaces, I.V. Ostrovskii, O.A. Korotchenkov, T. Goto and H.G. Grimmeiss 311 (1999) 1
Self-inhibiting heat flux: a chance for snowballs in hell?, S.L. Pistinner and D. Eichler 311 (1999) 475
Tokamak plasma diagnostics based on measured neutron signals, B. Wolle 312 (1999) 1
Plasma broadening and shifting of non-hydrogenic spectral lines: Present status and applications, N. Konjević 316 (1999) 339

Condensed matter: structure, thermal and mechanical properties

Instability in dynamic fracture, J. Fineberg and M. Marder 313 (1999) 1
Nonlinear nanoscale localization of magnetic excitations in atomic lattices, R. Lai and A.J. Sievers 314 (1999) 147
Feshbach resonances in atomic Bose–Einstein condensates, E. Timmermans, P. Tommasini, M. Hussein and A. Kerman 315 (1999) 199
Quasicrystal Lie algebras and their generalizations, J. Patera and R. Twarock 315 (1999) 241
Molecular simulation of polymeric networks and gels: phase behavior and swelling, F.A. Escobedo and J.J. de Pablo 318 (1999) 85

Condensed matter: electronic structure, electrical, magnetic and optical properties

Sonoluminescence and acoustically driven optical phenomena in solids and solid–gas interfaces, I.V. Ostrovskii, O.A. Korotchenkov, T. Goto and H.G. Grimmeiss 311 (1999) 1
Resonant X-ray Raman scattering, F. Gel'mukhanov and H. Agren 312 (1999) 87
Polymers as solids: a quantum mechanical treatment, J.J. Ladik 313 (1999) 171
Nonlinear nanoscale localization of magnetic excitations in atomic lattices, R. Lai and A.J. Sievers 314 (1999) 147
Variational extensions of BCS theory, R. Balian, H. Flocard and M. Véneroni 317 (1999) 251
Electronic structure of conjugated polymers: consequences of electron–lattice coupling, W.R. Salaneck, R.H. Friend and J.L. Brédas 319 (1999) 231

Cross-disciplinary physics and related areas of science and technology

Sonoluminescence and acoustically driven optical phenomena in solids and solid–gas interfaces, I.V. Ostrovskii, O.A. Korotchenkov, T. Goto and H.G. Grimmeiss 311 (1999) 1

Resonant X-ray Raman scattering, F. Gel'mukhanov and H. Agren 312 (1999) 87
Instability in dynamic fracture, J. Fineberg and M. Marder 313 (1999) 1

Geophysics, astronomy and astrophysics

Is there a dynamic effect in the screening of nuclear reactions in stellar plasmas?, G. Shaviv and N.J. Shaviv 311 (1999) 99
The solar neutrino problem – an update, A. Dar and G. Shaviv 311 (1999) 115
Role of gravity waves in the solar neutrino problem, E. Schatzman 311 (1999) 143
On the primordial helium abundance and spectroscopic uncertainties, S.L. Pistinner, P.H. Hauschildt, D. Eichler and E. Baron 311 (1999) 151
Photofluid instabilities of hot stellar envelopes, E.A. Spiegel and L. Tao 311 (1999) 163
The instability of radiative flows: from the early universe to the Eddington luminosity limit, N.J. Shaviv 311 (1999) 177
Radiation fields in moving media: new analytical and numerical solutions of the transfer equation, R. Wehrse and B. Baschek 311 (1999) 187
Radiation fields in moving media: effects of many spectral lines in AGN accretion disks, B. Baschek and R. Wehrse 311 (1999) 201
Radiation from dwarf nova discs, I. Idan, J.P. Lasota, J.M. Hameury and G. Shaviv 311 (1999) 213
Astrophysical jets: a phenomenological examination of acceleration and collimation, M. Livio 311 (1999) 225
ADAFs – Models, observations and problems, J.-P. Lasota 311 (1999) 247
Relativistic diskoseismology, R.V. Wagoner 311 (1999) 259
Non-axisymmetric hydrodynamic instability and transition to turbulence in two-dimensional accretion discs, P. Godon 311 (1999) 271
Dissipative motion in galaxies with non-axisymmetric potentials, A. El-Zant 311 (1999) 279
The early days of stellar structure theory, L. Mestel 311 (1999) 295
Axisymmetrical structures of planetary nebulae and SN 1987A, N. Soker 311 (1999) 307
The mass distribution of extrasolar planet candidates and low-mass secondaries, T. Mazeh 311 (1999) 317
Gravitational radiation in optical geometry applied to super-compact stars, M.A. Abramowicz 311 (1999) 325
Cataclysmic variables, J. Smak 311 (1999) 331
Black hole and transient binaries, A.R. King 311 (1999) 337
Massive supernovae in binary systems, P.C. Joss 311 (1999) 345
HST studies of cataclysmic variable white dwarfs, E.M. Sion 311 (1999) 353
Stellar collisions and mergers in the cores of globular clusters, M.M. Shara 311 (1999) 363
Recent advances in studies of the nova outburst, S. Starrfield 311 (1999) 371
Nova evolution with optically thick winds, A. Kovetz 311 (1999) 383
Modeling multidimensional reactive flows during nova outbursts – achievements and challenges, S.A. Glasner 311 (1999) 395
Infrared studies of classical novae and their contributions to the ISM, R.D. Gehrz 311 (1999) 405
X-ray observations of classical and recurrent novae, M. Orio 311 (1999) 419
Giant disk galaxies, dwarfs and Lyman alpha clouds, E.E. Salpeter 311 (1999) 429
Stellar bars in disk galaxies: From banyans to butterflies?, I. Shlosman 311 (1999) 439
Astrophysical evidence for massive black holes, A. Laor 311 (1999) 451
Quasars, accretion disks, and pregalactic enrichment of galaxies and IGM, S. Collin 311 (1999) 463
Self-inhibiting heat flux: a chance for snowballs in hell?, S.L. Pistinner and D. Eichler 311 (1999) 475

Earthquakes: from chemical alteration to mechanical rupture, D. Sornette 313 (1999) 237
Particle physics models of inflation and the cosmological density perturbation, D.H. Lyth and A. Riotto 314 (1999) 1
Gamma-ray bursts and the fireball model, T. Piran 314 (1999) 575
Neutrino propagation in matter, A.B. Balantekin 315 (1999) 123
Electrodynamics of neutron stars, F.C. Michel and H. Li 318 (1999) 227
Ultra-high-energy cosmic rays and inflation relics, V.A. Kuzmin and I.I. Tkachev 320 (1999) 199